

Part of Supplemental Examiner's Amendment

1 To overcome this obstacle, alternate technologies have been developed to
2 locate and track users or objects in an indoor environment. One such system uses
3 tags placed on the items that are to be tracked. In an electronic sense, the tags can
4 be either active or passive, and they communicate with base stations. The base
5 stations are physically linked together through a wired or wireless network. Each
6 tag transmits a unique code to identify itself. The location of the tag can thereby
7 be determined to be in the vicinity of the base station with which the tag last
8 communicated.

9 Such tag-based tracking and location systems require a significant
10 installation of specialized base stations. A tag-based system can only determine
11 the location of the tags as being "near" a particular base station. As a result, a
12 large number of base stations must be installed to achieve a sufficiently high
13 resolution. Furthermore, obtrusive tags have to be placed on every item that is to
14 be tracked or located, and in the case of infrared tags, the system operates only
15 when there is a line of sight between the tag and a base station. For these reasons,
16 tag-based systems have shown very limited success.

17 Another technology has been developed which uses radio frequency
18 transmissions from base stations and mobile units to track the location of mobile
19 units. This technology is described in U.S. Patent Application Number
KB 20 09/513155, entitled "Using a Derived Table of Signal Strength Data to
21 Locate and Track a User In a Wireless Network, and in U.S. Patent Application
KB 22 Number 09/513355, entitled "Locating and Tracking a User in a
23 Wireless Network Through Environmentally Profiled Data."

24 In this system, a Wireless Local Area Network (WLAN) is utilized for
25 locating and tracking users. A WLAN consists of base stations connected to a

